

REMARKS

This Response is submitted in response to the non-final Office Action dated January 18, 2007, wherein Claims 1, 2, 6, 7, 11 and 12 were rejected as anticipated by Kaneko (U.S. Patent Application Publication No. 2004/0156597) and Claims 3 – 5 and 8 – 10 were rejected as obvious over Kaneko. By this amendment Claims 13 – 32 have been canceled and Claims 1 – 12 remain pending in this application. Claim 1 is the only independent claim. Further examination and reconsideration in view of the following remarks are respectfully requested.

Traversal of Rejections

Anticipation by Kaneko

Claims 1, 2, 6, 7, 11 and 12 were rejected under 35 U.S.C. § 102(e) as anticipated by Kaneko (U.S. Patent Application Publication No. 2004/0156597). Applicant respectfully traverses this rejection.

Claim 1 requires, *inter alia*, "a first substrate having a first surface including at least one first optically active area," which is not taught by Kaneko. Kaneko teaches a semiconductor chip (ref. no. 20, cited by the Examiner as the first substrate) that has a *hole* through which an optical fiber is inserted (para. [0227]). Kaneko specifically teaches that the *optical fiber* (ref. no. 220) is aligned with the optical surface of the optical element (the second substrate, *see* ref. no. 10 and para. [0232]). There is no optically active area on the surface of the first substrate. In addition, as a result of this construction, no portion of the first substrate opposes the optically active area of the second substrate. Further, Kaneko discloses only an electrical coupling between the semiconductor chip (ref. no. 20) and the optical element (ref. no. 10) (*see* paras. [0221] – [0223]). Accordingly, Kaneko does not teach this feature as recited in Claim 1 of the present application.

Claim 1 also requires, *inter alia*, "a waveguide disposed within said polymer layer ... where said waveguide comprises a polymer core and a cladding for transmitting light therebetween." This feature is not taught by Kaneko either. Kaneko teaches a connecting part (ref. no. 240) that couples the optical element (ref. no. 10) to the optical fiber (ref. no. 220); however, this connecting part is *not* a waveguide. In paragraphs [0078] and [0083], Kaneko discloses that the connecting part is formed from a resin material to have a refractive index that nearly matches the refractive index of the core of the optical fiber. Thus, the connecting part does

not comprise a polymer core and a cladding that are necessary in a waveguide. In Kaneko, the only structure that comprises a waveguide is the optical fiber itself. However, as can be seen in Figure 18, the optical fiber is not transmitting light between first and second optically active areas of the first and second substrate surfaces. Instead, as discussed above, the optical fiber is positioned through a hole in the first substrate, which has no optically active area of its own. Nor is the optical fiber "disposed within said polymer layer...". The end of the optical fiber abuts the polymer layer (ref. no. 40) that is between the first and second substrates, but the optical fiber is not *disposed within* that layer. Therefore, Kaneko does not teach a waveguide as recited in Claim 1.

Because Kaneko does not teach every feature claimed, it cannot anticipate Claim 1. Claims 2, 6, 7, 11 and 12 depend from Claim 1 and are allowable for at least the same reasons. Therefore, Applicant respectfully requests that the rejection of Claims 1, 2, 6, 7, 11 and 12 as anticipated by Kaneko be withdrawn.

Additionally, Claim 2 requires that the cladding of the waveguide comprise a second polymer. As the connecting part of Kaneko does not include a cladding, there is no cladding comprising a second polymer. Accordingly, Kaneko cannot anticipate Claim 2 and Applicant respectfully requests that the rejection at least of Claim 2 be withdrawn.

Obviousness over Kaneko

Claims 3 – 5 and 8 – 10 were rejected under 35 U.S.C. § 103(a) as obvious over Kaneko. Applicant respectfully traverses this rejection.

Claims 3 – 5 and 8 – 10 depend from independent Claim 1 and are allowable for at least the same reasons as discussed above.

In addition, Claim 5 requires that each of the first and second surfaces comprise a plurality of optically active areas. However, Kaneko does not teach a first surface comprising *any* optically active areas, thus it would not be obvious to one of ordinary skill in the art to provide a plurality of optically active areas on that surface.


Therefore, based upon the above discussions, Applicant respectfully requests that the rejection of Claims 3 – 5 and 8 – 10 as obvious over Kaneko be withdrawn.

Conclusion

In view of the foregoing comments, it is respectfully submitted that the application is in condition for allowance, and such action is earnestly solicited. The Examiner is invited to call the undersigned at the telephone number listed below if doing so might advance the prosecution of this application.

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Respectfully submitted,



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